NUTRITION REPORTS INTERNATIONAL
Volume 39, Number 1 January 1989

ORIGINAL ARTICLES

Iron Status in Free-Living, Low Income Very Elderly
M.M. Manore, L.A. Vaughan and S.S. Carroll..... 1

Protein Requirements of Muscovy Male Ducklings
I. Plavnik..... 13

Nutrient Similarities and Differences of Older Lacto-ovo-vegetarian and Omnivorous Women
A.G. Marsh, D.K. Christensen, T.V. Sanchez, O. Mickelsen and F.L. Chaffee..... 19

The Effect of Copper Deficiency on Blood Antioxidant Enzymes in Rats Fed Sucrose or Sucrose and Lactose Diets
D.G.M. Carville and J.J. Strain..... 25

Influence of Different Fractions of Ragi (Eleusine coracana) Husk on the Growth of Albino Rats
S. Kanchana and K.S. Shurpalekar..... 35

Influence of Maternal Chloride Intake on Fluoride Utilization by Rat Offspring
F.L. Cerklewski..... 43

In Vitro and In Vivo Digestibility of Urea and Ammonia Treated High-Moisture Ryegrass Hay
D.F. Coombs, W.M. Craig, A.F. Loyacano, M.A. Jordan and L.R. Verma..... 51

Evaluation of Isolated Soy Protein Foods in Weight Reduction With Obese Hypercholesterolemic and Normocholesterolemic Obese Individuals
M.N. Volgarev, V.G. Vysotsky, V.A. Meshcheryakova, T.A. Yatsyshina and F.H. Steinke..... 61

Iron and Folic Acid Nutritional Status of Women in Slum
L. Raman, P.V. Subbalaxmi, N. Vasumathi, A. Rawal, G. Vasanthi, C.H. Parvathi, k. Adinarayana, A.B. Pawashe and K.V. Rao..... 73

Lead/Dietary Protein Interactions in Rats
S.P. Hu and C. Kies..... 81

Lasalocid Efficacy for White Leghorn and Broiler Breeder Replacements
B.L. Damron, R.B. Christmas and G. Untawale..... 91

Activities of Phytase and Alkaline Phosphatase in the Intestinal Contents of Germfree and Conventionalized Rats
E. Miyazawa and T. Yoshida..... 99

Effects of Different Enzyme Preparations on the Nutritional Value of Barley in Chicken Diets
B.A. Rotter, M. Neskar, R.R. Marquardt and W. Guenter... 107

The Effects of Mixed Faecal Bacteria on a Selection of Viscous Polysaccharides In Vitro
J. Tomlin, J.S. Taylor and N.W. Read..... 121

Chemical and Nutritional Evaluation of Flamboyant Beans (Delonix regia)
E.K. Marfo, O.L. Oke and O.A. Afolabi..... 137

Effects of Feed Intake Level and Compensatory Growth on Nitrogen Utilization in Lambs
S.J. Bartle and R.L. Preston..... 145

Changes on Maternal Tissues Promoted by a High Protein Diet Administration to Pregnant Rats
A. Marcos and P. Varela..... 157

Nutritional Status and Educational Achievement of Elementary First Grade Chilean Students
D. Ivanovic, R. Ivanovic, I. Truffello and C. Buitron... 163

Effect of Nutrient Stress on Various Phase I and II Drug Metabolising Enzymes of Fischer-344 Rats
V. Jagadeesan and F. Oesch..... 177

Effects of Hypolipidemic Drugs on Plasma Cholesterol Levels Characteristic of Dietary Casein and Soybean Protein Isolate in the Rat
S. Saeki and S. Kiriyama..... 185

Restricted Feeding on Second Cycle White Leghorn Hens
D.R. Ingram and J.A. Hebert..... 197

The Efficacy of Alkanate 3SL3, Calcium Peroxide and Nystatin as Defaunating Agents in Sheep
J.T. Hsu, G.C. Fahey, Jr., N.R. Merchen, L.L. Berger and J.H. Clark..... 205

Pancreatic Hydrolytic Enzyme Activity in Rats Fed Endophyte (Acremonium coenophialum) Infected Tall Fescue Seed
R.K. Dew, J. Szabo, N. Gay and J.A.Boling..... 215

NUTRITION REPORTS INTERNATIONAL
Volume 39, Number 2 February 1989

ORIGINAL ARTICLES

White Leghorn Production and Blood Parameters as Affected by Ethacal Feed Component
C.D. Aguillard, D.R. Ingram, J.A. Hebert and W.T. Springer..... 219

Reproductive Performance of Four Strains of Individually Caged Broiler Breeder Males Fed 16% and 7% Crude Protein Diets With Varying Levels of Metabolizable Energy
V.J. Rakphonghairoj, T.F. Savage and H.S. Nakaue..... 225

Changes in the Glucose Tolerance and Insulin Secretion in Hypertriglyceridemia: Effects of Dietary n-3 Fatty Acids
A. Zak, M. Zeman, P. Hrabak, A. Vrana, H. Svarcova and P. Mares..... 235

Plasma Biotinidase Assay Using the Protozoan Ochromonas Danica
H. Baker, B. DeAngelis and O. Frank..... 243

Effect of Plant Protein Substitution in Lowering Plasma Cholesterol, LDL and Cholesterol Elimination with High Fat Diets
N. Srinivasan and K.R. Shanmugasundaram..... 253

Maternal Health and Nutrition Survey for Masvingo Province, Zimbabwe: An Appraisal of Pregnant Women
P. Nemapare..... 265

Effects of Dietary Agar on Protein Digestibility in Rats
S.Y. Shiau, H.J. Wu, Y.L. Huang and L.C. Liu..... 281

Nutritional Adequacy of Preschool Children in Egypt
A.M. El-Asfahani, O.M. Galal and H.A. El-Sayed..... 291

Nutritive value of Rubber Seed Meal and Oil. Reproductive Performance of Female Rats fed Soybean Meal versus Rubber Seed Meal Diets
G.M. Babatunde and W.G. Pond..... 305

Effect of Parenteral Iron on Hematological Status and Reproductive Outcome in Pregnant Women from Slum
L. Raman, P.V. Subbalaxmi, N. Vasumathi, A. Rawal, G. Vasanthi, C.G. Parvathi, K. Adinarayana, A.B. Pawashe and K.V. Rao..... 313

Serum Lipoprotein Composition and Amounts During the Consumption of Two Different Low Protein Diets Followed by a Balanced Diet
M. Meghelli-Bouchenak, M. Boquillon and J. Belleville.. 323

Pancreatic Hydrolytic Enzyme Activity in Rats Fed Endophyte (Acremonium coenophialum) Infected Tall Fescue Seed
R.K. Dew, J. Szabo, N. Gay and J.A. Boling..... 345

Studies on Camel and Goat Milk Proteins: Nitrogen Distribution and Amino Acid Composition
M.A. Mehaia and M.A. Al-Kahnal..... 351

Influence of Tannin-Binding Substances on the Quality of Yellow and Brown Sorghum
G.P. Savage..... 359

Effect of Saturation of Dietary Lipids on Insulin Receptors and Membrane Fluidity in Rabbit Erythrocytes
E. Berlin, S.J. Bhathena, P.G. Kliman and K. Revett.... 367

Teratogenic Interaction of Folic Acid and Zinc Deficiencies in the Rat
J.C. Bremert, I.E. Dreosti and R.S. Tulsi..... 383

Plasma Calcium and Phosphorus Levels of Broiler Breeders with Different Feeding Schedules
S.M. Bootwalla, H.R. Wilson and R.H. Harms..... 391

Indian Regional Diets: Zinc Content and Absorption in Rats
S. Kanchana and K.S. Shurpalekar..... 399

The Effect of a Methylcholanthrene-Induced Sarcoma on the Lipid Status of the Fischer Rat
J.D. Radcliffe..... 409

Dietary Potassium Does Not Affect Magnesium Excretion in Rats
K.J.H. Wienk, A.G. Lemmens and A.C. Beynen..... 415

Evaluation of Barley Distillers Dried Grain: Protein Quality of Unprocessed and Milled Fractions
C.W. Newman, N.J.L. Roth and G.H. Watts..... 421

Antioxidant Properties of Hypotaurine: Comparison with Taurine, Glutathione and B-Alanine
P. Canas, R. Guerra and A. Valenzuela..... 433

NUTRITION REPORTS INTERNATIONAL
Volume 39, Number 3 March 1989

ORIGINAL ARTICLES

Food Image Processing: A Potential Method for Epidemiological Surveys
G.P. Sevenhuysen and L.A. Wadsworth..... 439

Effects of Distillers Dried Grains with Solubles and Dietary Magnesium, Vanadium and Chromium on Hen Performance and Egg Quality
K. Benabdeljelil and L.S. Jensen..... 451

Trace Mineral Metabolism During Gestation in the Rat: A Manganese-54 Study
J.A. Rheaume and E.R. Chavez..... 461

Optimal Ratios of Essential to Total Amino Acids for Amino Acid Mixtures Given to Rats
S. Ikemoto, M. Miyashita, C. Yamanaka, F. Shizuka, Y. Kido, K. Kishi, Y. Sogawa, H. Kori and S. Yamamoto..... 477

Influence of Dietary Fat Type on Serum Lipids in Rhesus Monkeys
J.A. Schouten, E.A. Van der Veen, C.J.K. Spaaij, C.M. Van Gent, C. Popp-Snijders and A.C. Beynen..... 487

Bioavailability of Magnesium and Potassium in Lambs Fed Different Magnesium Sources
K.E. Jackson, R.E. Tucker and G.E. Mitchell, Jr..... 493

Effect of Insulin, Growth Hormone and Alpha, Beta-Adrenergic Agents on Brain Tryptophan and 5-Hydroxyindoles of Rats
H. Yokogoshi..... 503

Biochemical Assessment of Vitamin Status in "Healthy" Elderly Japanses: Relationships Between Intakes and Biochemical Measures of Thiamine, Riboflavin and Ascorbic Acid
R. Itoh, K. Yamada, J. Oka, H. Echizen and K. Murakami. 509

Utilization of Aquatic Plants Elodea canadensis and Hydrilla verticillata in Laying Hen Diets II. Macrominerals and Microminerals
L.C. Lizama, L.R. McDowell and J.E. Marion..... 521

Growth of the Beef Calf with Selenium Supplementation
J.M. Phillips, A.H. Brown, Jr. and R.W. Parham..... 537

Large Acute Thermic Response to Chicken Essence in Humans
C. Geissler, M. Boroumand-Naini and C. Tomassen..... 547

Selenium Bioavailability: The Effect of Guar Gum Supplementation on Selenium Utilization by Human Subjects
M. Choe and C. Kies..... 557

Plasma Lipids and Lipoprotein Profile in Coronary Heart Disease and in Healthy Volunteers in South India
S. Kancharla, K.R. Shanmugasundaram, K.P. Misra, J.R. Shankaran and P. Sundaram..... 567

Influence of Roughage Source on Wintering Beef Heifer Performance
C.P. Bagley, D.G. Morrison, J.I. Feazel and G.D. Mooso. 575

Dose and Time Dependence of the Effect of Cod Liver Oil on Plasma Lipid Concentration in Rats
A.T. Hostmark, E. Lystad, A. Haug and E. Eilertsen..... 587

Comparative Nutritional and Quality Studies on Drum-Drying and Spray-Drying on Lupin Imitation Milk
L. Camacho, E. Vargas and C. Sierra..... 593

Effect of Glucagon Treatment on Turnover of Tissue Proteins in Rats
K. Hayase, G. Yonekawa and A. Yoshida..... 605

Comparison of Feed Allocation Systems in Broiler Nutrition Studies
S. Leeson, L.J. Caston and J.D. Summers..... 617

Estimation of Rat Body Composition Using Tetrapolar Bioelectrical Impedance Analysis
C.B. Hall, H.C. Lukaski and M.J. Marchello..... 627

Underestimation of Protein Synthesis Caused by Using DL-Isomer of [^{15}N]Methionine in Laying Hens
K. Hiramoto, T. Muramatsu and J. Okumura..... 635

Forage Intake and Performance of Yearling Lambs Fed Harvested Wheat Forage
R.H. Gallavan, Jr., W.A. Phillips and D.L. VonTungeln.. 643

Evaluation of Tobacco Leaf Protein Concentrate as a Supplement in Broiler Diets
R.D. Miles, D.R. Campbell, D.M. Janky, C.E. White and J.R. Rich..... 649

ERRATA..... 658

NUTRITION REPORTS INTERNATIONAL
Volume 39, Number 4 April 1989

ORIGINAL ARTICLES

Preliminary Raffinose Polyester and Methyl Glucoside Polyester Feeding Trials with Mice
C.C. Akoh and B.G. Swanson..... 659

Actual Energy and Protein Intakes and Nitrogen Balance of One Year Old Japanese Children
S. Ikemoto, S. Sakamoto, K. Uenishi, M.F. Wang, G. Inoue, Y. Niiyama, K. Kishi, H. Tanimoto, Y. Okada, N. Uezu and S. Yamamoto..... 667

Factors Predicting Dietary Quality of Postpartum Women
B. Worthington-Roberts, R.E. Little and M.D. Lambert... 673

Calcium and Manganese Bioavailability in Male, Weanling Rats as Affected by Dietary Calcium Source
J.M. Johnson and C. Kies..... 687

The Influence of Fatty Liver Syndrome on the Calcium Status of the Laying Hen
R.H. Harms and R.D. Miles..... 697

Effects of Lithium and Casein Intakes on Growth, Feed Efficiency and Organ Weights of Rats
H.K. Jang, M.A. Johnson and N.L. Canolty..... 703

Vitamin C Status of Free-Living, Cognitively Impaired and Unimpaired Elders
A.A. Spindler, M.A. Renvall, J.W. Ramsdell and S.Mofidi. 713

Beef Breed Response to Dietary Energy Level: In Vivo Digestibility
D.L. Prichard, H.W. Essig and I.D. Teare..... 721

Effect of Fibre and Phytate of Regional Diet on the Apparent Absorption of Zinc in Rats
S. Kanchana and K.S. Shurpalekar..... 727

Effects of Potassium and Sodium In Vitro Ruminal Fermentations Containing Lasalocid or Monensin..... 735

Hypocholesterolemic Effect of Barley Foods on Healthy Men
R.K. Newman, S.E. Lewis, C.W. Newman, R.J. Boik and R.T. Ramage..... 749

Chemiluminescence Response of Polymorphonuclear Leukocytes From Vitamin E Deficient Sickle Cell Patients
B.S. Baliga, L.J. Sindel, C.J. Smith, L.D. Jenkins, A. Bendich and V.N. Mankad..... 761

Administration of Lasalocid in a Self-Fed Mineral Carrier or Hand-fed Three Times Weekly to Stocker Cattle on Pasture
T. DelCurto, D.W. Weber and A.M. Craig..... 773

Dietary Canola Seeds Alter the Fatty Acid Composition of Bovine Subcutaneous Adipose Tissue
D.C. Rule, W.H. Wu, J.R. Busboom, F.C. Hinds and C.J. Kercher..... 781

Blood Magnesium and Red Blood Cell Hemolysis Following Exercise in Female Runners Consuming Adequate Dietary Magnesium
M.M. Manore, C.L. Wells and W.R. Lehman..... 787

Hypocholesterolemic Effect of Rambutan (Nephelium Lappaceum) Supplementàtion in Thai Adults
S. Mongkolsirikieat, P. Areegitranusorn, N. Limratana, T. Limpaiboon and V. Lulitanond..... 797

Nutritional Utilization of Oligo (L-Methionyl) Caseins by the Growing Rat
R. Pion, E. Mendes-Pereira, H. Gaertner and A.Puigserver.805

Effects of Ethanol Extraction on the Utilization of Soybean Protein by Growing Rats
J.D. Hancock, A.J. Lewis and E.R. Peo, Jr..... 813

Effect of Dietary Methionine on Japanese Quail Processing Yields
K.F. Shim and E.V. Chen..... 823

Production Potential and Mineral Metabolism of Three Breeds of Cows in a Range/Forage Based Cow/Calf Production System
P.F. Hardt, L.W. Greene and J.F. Baker..... 833

Diurnal Urinary Urea Excretion and Bodybuilding Exercise
J.F. Hickson, Jr., J.M. Pivarnik and I. Wolinsky..... 845

The Effects of Protein Dietary Sources on Serum Cholesterol and Bile Acid Microbiological Transformations in Rabbits
N. Pacini, A. Ferrari, R. Zanchi, M. Corti and G.F. Greppi..... 851

Hepatic Carnitine and Triglyceride Lowering Effect of Dietary Pectin in the Rat
T. Ide and M. Horii..... 861

In Vitro Fermentation of Human Ileal Digesta by Human Intestinal Microbiota: Influence of Supplemental Nitrogenous Matter
M.I. McBurney and L.U. Thompson..... 867

NUTRITION REPORTS INTERNATIONAL
Volume 39, Number 5 May 1989

ORIGINAL ARTICLES

Effects of Cerebellectomy on Food Intake, Growth and Fecal Lipid Level in the Rat
G. Jacquart, P. Mahler and C. Strazielle..... 879

Studies on Hypolipidemic Effects of Dietary Rice Bran Oil in Human Subjects
T.C. Raghuram, U.B. Rao and C. Rukmini..... 889

Calcium and Phosphorus Utilization from Wheat Bran by Lacto-Ovo-Vegetarians and Omnivores
N. Nnakwe, C. Kies and H.M. Fox..... 897

Nutritional Characterization of a Chemically Modified Protein - A Methyl-Esterified Ovalbumin
Y. Furuichi, Y. Kokean, T. Sato and T. Takahashi..... 907

Wheat Bran and Whole Wheat Flour as Sources of Fiber and Calories for the Rat
V. Cilli and P. Hevia..... 917

Comparison of Anthropometric Measurements of Premenarcheal and Postmenarcheal Black and White Adolescent Girls
M.K. Korslund, M. Lentner, A.J. Clark, F.G. Ercanli-Huffman, J.H. McCoy, E.E. Glover, M. Hegsted, P.E. Schilling, M. Liebman, M.A. Kenney, S.F. Stallings, G. Disney, T. Wakefield, S.W. Moak and J.A. Driskell..... 931

Effect of Time on Tissue Deposition of Selenium in Sheep Fed Calcium Selenite or Sodium Selenite
F.N. Tarla, P.R. Henry, C.B. Ammerman and P.V. Rao..... 943

Evaluation of Nutritive Status in Sportswomen Assessment by Immunocompetence
P. Varela, A. Marcos and A. Requejo..... 949

Beef Breed Response to Dietary Energy Level: In Vitro Digestibility
D.L. Prichard, H.W. Essig and I.D. Teare..... 957

Influence of Copper Deficient Diet on the Metabolic Changes in Rats Exposed to PCB
T. Katayama, K. Ohara, T. Kushuhara, Y. Momota and N. Kato..... 963

Reversibility of the Effects Induced in Neonatal Chick Livers by a Cholesterol Diet
M. Garcia-Gonzalez, J.L. Segovia and M.J. Alejandre.... 973

Nutrition and Education I. Educational Achievement and Anthropometric Parameters of Chilean Elementary and High School Graduates
D. Ivanovic and M. Marambio..... 983

Implanting Trenbolone Acetate and Estradiol in Finishing Beef Steers
D.E. Eversole, J.P. Fontenot and D.J. Kirk..... 995

Corn and Soft Red Wheat in Beef Finishing Diets
A.F. Loyacano, J.E. Pontif, D.F. Coombs and J.L. Kreider..... 1003

Effect of Isoacids on Ruminal Fermentation Characteristics and Apparent Nutrient Digestibility
M.J. Arambel and J.L. Walters..... 1009

Geometry and Territorial Expansion of Basilar Dendrites
V. Fernandez, L. Adaro, W. Kaufmann, E. Berlec and V. Munoz..... 1015

Effects of Dietary Protein and Crystalline Lysine on Performance of Starting and Finishing Swine
M.D. Harrison, D.R. Campbell, W.R. Walker and G.E.Combs.1027

Effect of Dietary Aflatoxins on Nicotinamide Nucleotide Synthesis in Liver
R.B. Sashidhar, K.S. Jaya Rao and B.S. Narasinga Rao... 1037

Estimating the Energy Contribution of Fats to Practical Diets Using a Chick Bioassay
N.M. Dale and H.L. Fuller..... 1045

Free-Choice Grain and Forage Diets for Early-Weaned Beef Calves
R.B. Staigmiller and D.C. Adams..... 1053

Effect of Permethrin and Cypermethrin on Vitamin A Distribution to the Various Organs of Chicks Fed Vitamin A-Deficient Diet
R.K. Kapoor, N. Singh, S.S. Chauhan and U.K. Misra..... 1061

Mineral Supplementation of Beef Cattle in an Andean Region of Colombia
M.A. Laredo C., F. Gonzalez, J.A. Carrillo and L.R. McDowell..... 1069

Utilization of Four Cultivars of Grain Amaranth for Growth in Rats
W.G. Pond, J. Lehmann and R. Clark..... 1081

Influence of Excess Protein Intake on Whole-Body Protein Synthesis in Chicks
K. Kita, T. Muramatsu and J. Okumura..... 1091

NUTRITION REPORTS INTERNATIONAL

Volume 39, Number 6 June 1989

ORIGINAL ARTICLES

Some Serum Minerals, Slimming Drugs and Diets Interrelationship
S.Y. Al-Okbi and O.M. Metwalli..... 1099

Vitamin A Intake and Vitamin A Status in an Elderly, Institutionalized Population
L.S. Asciutti-Moura, J.C. Guilland, F. Fuchs, J. Klepping and D. Richard..... 1107

Effect of Dietary Copper on Tissue Mineral Composition as an Estimate of Copper Bioavailability in Broiler Chicks
D.R. Ledoux, P.R. Henry, C.B. Ammerman and R.D. Miles... 1117

Calculation of the Metabolizable Energy of Diets with Wheat Bran for Rats
A. Zuleta and M.E. Sambucetti..... 1127

The Beltsville Diet and Blood Pressure in Normotensive Men and Premenopausal and Postmenopausal Women
J. Hallfrisch, A. Powell, S. Reiser, W. Mertz and E.S. Prather..... 1139

Macronutrient, Copper and Zinc Intakes of Young Adult Males as Determined by Duplicate Food Samples and Diet Records
J.R. Rawson and D.M. Medeiros..... 1149

Educational Factors Influencing the Nutritional Learning of Elementary First Grade Chilean Schoolers
R. Ivanovic, I. Truffello, C. Buitron and D. Ivanovic... 1161

Relationships Between Anthropometrical Measurements, Lipemia and Apolipoproteinemia in a Sample of Madrid Secondary School Adolescents
I. Goni, L. Garcia-Diz, C. Cuesta, F.J. Sanchez-Muniz and A. Castro..... 1167

The Effect of Clenbuterol and Cimaterol on the Endogenous Nitrogen Loss of Sheep
F.D.DeB. Hovell, D.J. Kyle, P.J. Reeds and D.H. Beermann.1177

Effects of Dietary Supplement of Excess Histidine on Liver Lipids and Serum Cholesterol in Rats Fed Diets Varying in Casein Levels and Protein Quality
Y. Aoyama, E. Ohmura, T. Kato and A. Yoshida..... 1183

Bioavailability of Iron in a Diet Based on Fortified Extruded Maize-Soybean in Women
C. Moron, S. Kremenchuzky, M.I. Passamai, A. Cintioni, C. Gerschcovich and I. Mendiondo..... 1195

In Vitro Prediction of Iron Bioavailability for Food Fortification
P. Whittaker, M.R. Spivey Fox and A.L. Forbes..... 1205

Nutritional Status and Unfavourable Pregnancy Outcome in Egyptian Women
L.M. Hanna, L.N. Habashi, S.T. Topouzada, S.M. El Shebini and O.M. Galal..... 1217

Use of Grain Amaranth in Diets of Japanese Quail and Chickens
P. Vohra, S. Bersch, N. Acar and R. Becker..... 1227

On the Nutritional Properties of Starch and Dietary Fiber in Cassava Bread
J. Tovar, I. Bjorck and N.G. Asp..... 1237

Nutritional Status of Beef Cattle in Specific Regions of Venezuela I. Macrominerals and Forage Organic Constituents
D. Morillo, L.R. McDowell, C.F. Chicco, J.T. Perdomo, J.H. Conrad and F.G. Martin..... 1247

TBA Reactive Material in Human Plasma and Its Relation to Nutritional Parameters
F. Ursini, G. Maiani, A. Polito, M. Coassin and A. Ferro-Luzzi..... 1263

A Time Course Study on Differential Depletion of N-6 and Repletion of N-3 and N-9 Long Chain Polyunsaturated Fatty Acids in Liver, Heart and Kidney Glycerophospholipids from Rats Fed Saturated Fats or Fish Oil
Y.S. Huang, D.F. Horrobin, B.A. Nassar and K.R. Ells.... 1275

AUTHOR INDEX..... 1288